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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C.

In the Matter of	)	
	)	
Telephone Number Portability	)	CC Docket No. 95-116
	)	
	)	RM 8535
	)	

COMMENTS OF AMERITECH IN RESPONSE TO REQUEST FOR FURTHER COMMENTS

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Dated: August 3, 1998

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I. INTRODUCTION AND SUMMARY

Ameritech files its Comments in response to the Commission's Request for Further Comments in the LNP Cost-Recovery Order, which seeks comment on "ways to apportion the different types of joint costs" associated with long-term number portability ("LNP") implementation.[1] Ameritech has strongly supported the development of number portability over the past five years, and continues to be one of the leaders in the development and deployment of LNP at both the state and federal levels. Ameritech applauds the Commission's LNP Cost-Recovery Order, and believes that in many respects it complies with the competitively-neutral cost-recovery mandate of the Telecommunications Act of 1996.[2]

Ameritech will describe in Appendices A-G attached to its Comments how it intends to identify and allocate joint and common costs to be recovered through the LNP monthly charge, and rates for the long-term number portability query service and unbundled access to the LNP

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[1] Telephone Number Portability, CC Docket No. 95-116, RM 8535, Third Report and Order, released May 12, 1998 ("LNP Cost-Recovery Order"), para. 167.

[2] 47 C.F.R. Section 251(e).

database ("Query Services"). Ameritech will also describe its proposed general cost and demand forecast methodologies, and will identify each functionality, facility, piece of equipment, and software component that has been or will be added, modified or augmented as a result of LNP. In each case, Ameritech will explain why the associated expenditure is required to provide LNP. Ameritech will show that the methodology it intends to use to develop the LNP monthly charge and the Query Service rates will comply with the Commission's LNP Cost-Recovery Order.

The Commission has expressed concern regarding the identification and assignment of LNP-related costs associated with signaling system seven ("SS7"), operations support systems ("OSS") and switching systems. Ameritech will describe how these systems are used to provide LNP, and will specify each addition, modification and augmentation required to support LNP. In this regard, it is important to note that Ameritech's vendors were instructed to make only those changes to switches, SS7 and OSS specifically required to support LNP. Moreover, Ameritech has set up special accounts and budgets that separately track costs directly attributable to LNP, which form the core of the amounts reported as direct costs of LNP.

In all but one case, the direct costs assigned to LNP relate to items that are of no benefit whatsoever to non-LNP services. That is to say, with a single exception, costs assigned to LNP for additions, modifications or augmentations are expected to provide no incremental benefit to non-LNP related services, because they do not create or improve a capability used by those services, nor do they create additional spare capacity for non-LNP services beyond what was previously available. In cases where Ameritech augments its network or a system to support additional traffic created by LNP, Ameritech only assigns to LNP the costs associated with creating the incremental increase in capacity required to support LNP traffic. As such, costs assigned to LNP are truly direct -- not joint -- costs and need not be prorated.

In addition, Ameritech will discuss how it will apportion the one joint cost (Link Monitoring) applicable to LNP and non-LNP services. In that single case, the joint cost was incurred to create a new maintenance capability required to provide reliable LNP, but which also provides a benefit to non-LNP services. Therefore, a portion of the cost of the new maintenance system is properly an incremental cost of LNP. Ameritech proposes to apportion that joint cost based upon relative projected usage of the system facility, equipment or software involved.

Ameritech also discusses how it intends to identify and allocate overheads. Ameritech proposes that the LNP monthly charge only recover those overhead costs that are incremental to providing LNP. That is to say, Ameritech proposes to recover overhead-type costs that were or will be incurred directly as a result of LNP, or that otherwise increase as a result of LNP. As required by the <u>LNP Cost-Recovery Order</u>,[3] Ameritech will conduct a cost study that identifies as many of these incremental overheads as economically and technically feasible. As demonstrated in Appendix B, it is not reasonably possible to specifically identify all such incremental costs of LNP, and Ameritech proposes the use of allocation factors to quantify the balance of those incremental overheads. The allocation factors used will be based upon earlier cost studies that quantified the level of forward-looking incremental common overhead-type costs assigned to retail services. As discussed in Appendix B, this is the same methodology that the Commission has authorized for the calculation of forward-looking incremental overhead costs used to price unbundled network elements and interconnection. As required, Ameritech will exclude any non-incremental overhead costs so there will be no double-recovery.

Ameritech proposes that the Query Services, like other new interstate services, also recover a reasonable portion of overheads. Since the Query Services benefit from existing overheads, there is no reason why users of the Query Services should not contribute to the recovery of these overheads on the same basis as users of other services. To that end, Ameritech proposes that overheads be allocated to the Query Services through the use of an overhead allocation factor based upon Automated Reporting Management Information Systems ("ARMIS") data. This is a generally accepted methodology for pricing new interstate services, and its use was specifically authorized by the Commission for calculating overheads applicable to a new service under Open Network Architecture ("ONA").[4]

Ameritech has filed a Petition for Reconsideration and Clarification regarding certain aspects of the Commission's LNP Cost-Recovery Order that are relevant to this proceeding. Specifically, Ameritech sought reconsideration or clarification of the following points that are relevant here:

1. The Commission should clarify or upon reconsideration determine that while the use of general overhead factors is not permitted, the use of allocation factors is allowed. The LNP monthly charge should recover all incremental costs of providing number portability, including incremental overhead costs, not just those that can be specifically identified in a cost study. The Commission mistakenly found that incumbent LECs could recover only overheads that they demonstrate are incremental to LNP in order to prevent "double-recovery." If this ruling is interpreted to preclude the use of allocation factors, then incumbent LECs will be precluded from recovering a very substantial amount of the increment overhead-type costs caused by LNP. Factors are routinely used to measure incremental overheads and will not lead to double recovery. Rather, the use of allocation factors in conjunction with specific overhead-type costs is necessary to prevent a significant under-recovery of the incremental costs of LNP. Ameritech estimates that the inability to use allocation factors will result in up to 79% of the incremental shared and common costs of LNP not being recovered or an under-recovery of up to $40 Million. As such, the use of allocation factors is necessary to prevent a subsidy to LNP in violation of the competitive neutrality requirements of Section 251(e)(2) of the Telecommunications Act of 1996.

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[3] para. 74.

[4] See, Open Network Architecture Tariffs of Bell Operating Companies, CC Docket No. 92-91, Order, released December 15, 1993 at para. 50 (n.93).

2. The Commission should reconsider its decision precluding the use of general overhead factors to price the Query Service. The Query Service, like other new interstate services, should bear its share of all overhead costs.

3. The Commission should reconsider the application of trunk equivalency to Centrex and PBX and apply it on the same basis as the Presubscribed Interexchange Carrier Charge ("PICC") surcharge ordered by the Commission. That is to say, one monthly charge should be assessed to each PBX trunk and $1/9^{th}$ of that charge to each Centrex line. This approach is necessary so PBX users do not bear an unreasonably high share of the LNP cost subsidy. Also, application of trunk equivalency on a basis different than the PICC would create unforeseen administrative and billing problems and costs.

4. The Commission should clarify whether or not it has asserted jurisdiction over unbundled access to the LNP database unbundled network element, and if so, whether that network element may be offered under contracts consistent with Sections 251(c)(3) and 252 of the Telecommunications Act of 1996, or under interstate tariffs.

5. The Commission should clarify that it has asserted jurisdiction over the recovery of interim number portability costs, so those costs can be recovered through the same competitively-neutral mechanism as LNP costs. This approach will ensure consistency across jurisdictions and will eliminate duplication and increase efficiency.

6. The Commission should reconsider or clarify that the number portability monthly charge should be assessed to FGA access lines because they are used by end users of services, like foreign exchange ("FX") and exchange lines, that are subject to the charge. For this reason, it would be discriminatory and a violation of the competitive-neutrality mandate to exclude FGA lines from the application of the LNP monthly charge.

Ameritech will not repeat its Petition for Reconsideration and Clarification here. In its Comments, Ameritech will address the impact of some of these issues on the LNP monthly charge and Query Services rates.

II. AMERITECH'S COST METHODOLOGY WILL PROPERLY IDENTIFY ONLY INCREMENTAL COSTS CAUSED BY LNP, AND WILL RECOVER THEM THROUGH THE LNP MONTHLY CHARGE AND THE QUERY SERVICES.

In Appendix A, Ameritech discusses its general cost methodology for pricing LNP-related services. It proposes to calculate the costs associated with LNP separately for the following categories:

a) Cost recovery on a per access line/unbundled local switching ("ULS") basis through the LNP monthly charge; and

b) Cost recovery on a per query basis for the Query Service and Unbundled LNP Database Access ("Query Services").

The direct costs developed for the LNP monthly charge and the Query Services will be consistent, with the following exceptions. First, as required, Ameritech assumes that the LNP monthly charge will only be assessed for 5 years. Second, as required, the Cost of Money (return) will be 11.25%. Third, the LNP monthly charge will only recover overhead-type costs that are incremental to LNP. Fourth, if authorized, the Query Services costs and prices will be developed consistent with new service offerings under price caps, including the recovery of overheads based upon the use of a general allocation factor.

The starting point for the LNP cost studies will be the specific accounts that Ameritech has established to record the direct costs of developing, provisioning and maintaining LNP. Only direct costs were assigned to those accounts through specific initiative codes. Budget projection detail will be used to estimate future LNP costs. Costs will be calculated for network-related Capital Investments and Expenses, Administration Expenses, Implementation Expenses, and SSP, STP and Link Investments. If authorized, Ameritech will also add the costs that are reported to Interim Number Portability accounts.

Ameritech's cost study methodology is designed to recover the total service long run incremental costs ("TSLRIC") of developing, ordering, provisioning, maintaining, and billing LNP through the LNP monthly charge and the Query Services rates. The sources for the investments used in the cost studies are the LNP tracking accounts and budgets, and the SS7 cost model utilized by Ameritech to identify incremental costs applicable to each SS7 message transaction.

The resulting direct costs will be allocated between the LNP monthly charge and the Query Services based upon projected relative usage. In other words, the costs will be split between these two categories of services based upon the relative percentage of LNP monthly charge queries, and the relative percentage of Query Services queries. The development of the underlying demand forecasts used to make this allocation is discussed in Section V below, and Appendix C.

Due to the five-year cost recovery period for the LNP monthly charge, the capital investments directly associated with or allocated to LNP and recovered through the LNP monthly charge will be depreciated over five years in order to ensure total cost recovery. Also, recurring expenses associated with maintenance, administration and taxes will be calculated into the future, converted to a present worth amount, and then recovered over the five-year period through the LNP monthly charge.

Ameritech also proposes to recover the incremental overhead-type costs associated with the LNP monthly charge through 1) an analysis of identifiable incremental shared and common costs, and 2) through the application of a shared and common cost factor which will be derived from an existing analysis of retail shared and common costs. This study is discussed further in Section III below and Appendix B.

III. USE OF OVERHEAD ALLOCATION FACTORS IN DEVELOPING THE LNP MONTHLY CHARGE IS NECESSARY TO ENSURE RECOVERY OF ALL INCREMENTAL COSTS.

In Appendix B, Ameritech discusses overhead-type costs. In that Appendix, Ameritech details how it plans to identify and recover incremental overhead-type costs through the LNP monthly charge. Ameritech shows that it will only seek recovery of overheads that are incremental to LNP, as identified through the use of a generally accepted methodology. However, Ameritech will exclude from the allocation any overhead costs that are not incremental to LNP.

In the LNP Cost-Recovery Order (para. 74), the Commission determined that incumbent LECs may only recover "those incremental overheads that they can demonstrate they incurred specifically in the provision of long-term number portability." However, the Commission specifically prohibited the use of "general overhead loading factors" because their use "might lead to double recovery." The Commission is correct that there are incremental overhead costs that should be recovered on a competitively-neutral basis through the LNP monthly charge. In fact, Ameritech does not intend to use a general overhead factor to price the LNP monthly charge to identify those costs. However, if the Commission interprets its LNP Cost-Recovery Order as precluding the use of allocation factors to identify the incremental overhead-type costs of LNP, that decision would preclude the recovery of a significant portion of the incremental costs of LNP, in violation of the Commission's LNP Cost-Recovery Order.

As demonstrated in the attached economic white paper (Appendix B) by Dr. Debra Aron, there is no factual or economic basis for precluding the use of allocation factors to identify incremental overhead-type costs. The use of allocation factors is necessary to recover all the incremental overhead costs caused by LNP. Failure to do so will mean that very significant incremental costs caused by LNP will not be recovered, in violation of the Commission's own two pronged test for competitive neutrality LNP Cost-Recovery Order, (para. 53). In Appendix B, Dr. Aron estimates that the inability to use allocation factors would result in up to 79% of the incremental shared and common costs of LNP remaining unrecovered, or an under-recovery of up to $40 Million per year. Ameritech's inability to recover these very significant incremental costs through the LNP monthly charge will disparately impair its ability to earn a normal return since this constraint does not apply to competitive local exchange carriers ("CLECs") and commercial mobile radio service ("CMRS") providers.[5] For the same reason, it will disparately affect the incumbent LECs' ability to compete for customers since the Commission's prohibition on the use of overhead factors will cause different levels of under-recovery for different competing carriers.

As demonstrated in Appendix B, the Commission is also mistaken when it states that use of overhead factors to determine incremental overhead costs will lead to "double recovery." The fact is that the failure to use allocation factors will lead to a significant under-recovery, since an entity's overhead costs increase as the size and scope of its operations increase. Failure to recognize this fundamental fact will result in LNP monthly rates that significantly under-recover the incremental costs caused by LNP. The problem is that it is not feasible or economical to specifically capture all incremental overhead costs that are in fact caused by LNP, since the incremental impact of LNP cuts across literally thousands of employees, functions and responsibility codes. As a result, it is not feasible to directly account for each such employee, code or function, nor is it possible to determine which activity may have caused a specific increase in its cost without the use of factors.

For example, as discussed in Appendix B, Ameritech performed a cost study of overheads

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[5] See, LNP Cost-Recovery Order, para. 136.

applicable to unbundled network elements. Although it only covered four of Ameritech's operations, the study took 2200 person hours and was very costly to perform. Subsequently, Ameritech analyzed retail shared and common costs. This second study took roughly twice as long as the original study, or around 4,400 additional person hours. Even so, the studies could not specifically isolate and measure around 79% of incremental joint and common costs caused by the unbundled network elements or retail services without the use of allocation factors. Moreover, the network element study still had to attribute shared and common costs in the aggregate, rather than to individual elements.

Consequently, it is incorrect to say that the use of allocation factors would lead to double recovery. Rather, Ameritech's proposed use of allocation factors simply recognizes the fact that each function added by a carrier increases its overheads in ways that cannot be readily determined, but can be accurately estimated. To this end, Ameritech proposes to identify the incremental overheads of LNP that can be reasonably identified and measured, and then to estimate the balance of the incremental overheads caused by LNP through the use of allocation factors. The factors would, of course, exclude allocation of non-incremental common overheads. In fact, the Commission has approved this very approach for use in developing TELRIC costs for pricing interconnection and network elements. The Commission explained that "there will remain some common costs that must be allocated among network elements and interconnection services."[6] The Commission also correctly found that "[a]gain these common costs, setting the price of each discrete network element based solely on the forward-looking incremental costs directly attributable to the production of individual elements will not recover the total forward-looking

[6] Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, CC Docket No. 96-98, and Interconnection between Local Exchange Carriers and Commercial Mobile Radio Service Providers, CC Docket No. 95-185, First Report and Order, released August 8, 1996, ("Interconnection Order"), para. 695.

costs of operating the wholesale network." As a result, the Commission found that "a reasonable measure of such costs shall be included in the prices for interconnection and access to network elements.[7] The Commission correctly found that it is reasonable to use a "fixed allocator" to allocate common costs.[8] The Commission should permit the use of the same methodology here.

IV. LIKE OTHER NEW SERVICES, THE QUERY SERVICES SHOULD BE PRICED USING GENERAL OVERHEAD FACTORS.

In Appendix B, Ameritech also discusses recovery of overhead costs through the Query Services rates. This Appendix shows that the Commission should permit the use of general overhead factors to price the Query Service on the same basis as any other new interstate service. The position that incumbent LECs may not use general overhead factors to price the Query Services is based upon a misunderstanding of the impact of new functions and services on overheads, and the ability of carriers to specifically identify each overhead cost applicable to them, in the absence of the use of general factors. The Commission's policies relating to most other interstate services recognizes that overheads increase as a carrier adds new functions and services, and that those increases in overheads cannot reasonably and economically be uniquely identified.

Moreover, there is no reason why any new interstate service, including the Query Services, should not contribute to the recovery of existing overheads that benefit them. As a result, the Commission permits the use of general overhead factors for virtually all interstate services, including new services under price caps, switched access services, special access services, open network architecture ("ONA"), virtual and physical collocation, etc. In fact, in another context, the Commission has found that the use of ARMIS data is a reasonable estimate

[7] Id. para 694.

[8] Id. para. 696.

of the overhead costs applicable to a new service.[9]

As a result, Ameritech requests authorization to calculate the overhead costs applicable to Query Services through the standard approach of estimating those costs via an overhead loading factor based upon ARMIS data. That methodology is consistent with how other services at the federal level are priced, and ensures the Query Services recover overhead costs on the same basis as other new interstate services.

V. COSTS WILL BE ALLOCATED BETWEEN LNP AND THE QUERY SERVICES BASED UPON PROJECTED RELATIVE USAGE.

In Appendix C, Ameritech discusses the allocation of costs between the LNP monthly charge and the Query Services. Ameritech will perform this allocation through the use of the generally accepted approach of allocating joint costs based upon projected relative usage. In order to estimate relative usage, Ameritech will prepare a demand forecast for retail LNP (recovered through the LNP monthly charge) and the Query Services.

To obtain the most accurate demand projections available for the Query Services, Ameritech will request detailed demand forecasts from all N-1 carriers. All carrier surveys and forecasts provided to Ameritech will be considered confidential information, and will only be used for network planning purposes, and to price and provide LNP, including the Query Services. Ameritech will use network engineering traffic studies, billing data and reasonable assumptions to project the demand for its retail LNP queries whose costs will be recovered through the LNP monthly charge, and as additional input into its Query Services forecast.

[9] See, Open Network Architecture Tariffs of Bell Operating Companies, CC Docket No. 92-91, Order, released December 15, 1993 at para. 50 (n.93.)

VI. SS7 COSTS ASSIGNED TO LNP ARE DIRECT COSTS THAT ONLY BENEFIT LNP, INCLUDING THE QUERY SERVICES. THE ONE JOINT COST WILL BE ALLOCATED BASED UPON PROJECTED RELATIVE USAGE.

In Appendix D, Ameritech details SS7 costs that are incremental to LNP. The deployment of LNP requires use of the SS7 network to carry queries to and from the LRN database. Ameritech incurs additional SS7 signaling network costs in order to create the capacity and technical capability to process and transmit LNP queries, and to handle the large additional volume of signaling traffic that LNP will generate. The SS7 costs assigned to LNP reflect the addition of new equipment, facilities, or software; the modification thereof to create new capabilities necessary to support LNP queries; or augmentations of the existing systems to add capacity required to support the very substantial additional volume of signaling traffic (up to an estimated 5,000 transactions per second) that LNP will generate. With a single notable exception, none of the costs assigned to LNP create a capability that benefits another service, or adds an additional capacity for non-LNP services. The allocation of this one joint cost (link monitoring system) was made based upon projected usage as discussed in Appendix D.

VII. EACH OSS COST ALLOCATED TO LNP IS A DIRECT COST THAT BENEFITS ONLY LNP AND THE QUERY SERVICES.

In Appendix E, Ameritech discusses the incremental impact of LNP on OSS, and the related direct costs applicable to LNP. In the LNP Cost-Recovery Order (para. 72), the Commission states that "carrier-specific costs directly related to providing number portability are limited to costs carriers incur specifically in the provision of number portability services, such as for the querying of calls and the porting of telephone numbers from one carrier to another" (emphasis added). In that Appendix, Ameritech demonstrates why the pre-ordering, ordering, provisioning, maintenance and billing of LNP requires the use of Ameritech's OSS, details the additions, modifications and augmentations to OSS required for this purpose, and explains why each is required. All OSS-related costs assigned to LNP were incurred specifically to support LNP, and do not provide any incremental benefit, capacity or capability for any non-LNP service. That is to say, OSS expenditures assigned to LNP costs represent the costs of developing new OSS to support LNP processes, and of modifying and augmenting existing OSS for the sole purpose of ensuring that they have the capability and capacity to support LNP.

VIII. ALL SWITCHING COSTS, INCLUDING AIN, ASSIGNED TO LNP ARE SOLELY CAUSED BY LNP.

In Appendix F, Ameritech addresses the impact of LNP on switching, including AIN. In paragraph 73 of the LNP Cost-Recovery Order, the Commission elects to "reject requests of some commenters that we classify the entire cost of an upgrade as a carrier-specific cost directly related to providing number portability. . ." The Commission further states that "costs for software generics, switch hardware, and OSS, SS7, and AIN upgrades. . . provide a wide range of services". As a result, the Commission concluded that "only a portion" of such costs are carrier-specific costs of LNP.

In Appendix F, Ameritech explains why the switching and AIN costs for which it is seeking recovery through the LNP monthly charge and the Query Services rates are not "joint" costs, but are rather carrier-specific costs incremental to LNP. Therefore, Ameritech does not propose any apportionment with non-LNP services. For example, all Ameritech digital switches had been made AIN capable prior to the LNP mandate. Therefore, Ameritech was able to purchase from its switch vendors software upgrades exclusive to the LRN trigger. This software supports no other AIN based services and is, therefore, a carrier-specific direct cost.

IX. EACH FUNCTION, SYSTEM, PIECE OF EQUIPMENT, AND SOFTWARE COMPONENT THAT HAD TO BE ADDED, MODIFIED OR AUGMENTED TO SUPPORT LNP IS PROPERLY TREATED AS A DIRECT COST.

In Appendix G, Ameritech provides a summary of each function, system, piece of equipment, and software component that had to be added, modified or augmented to support LNP. In developing the project plan for deploying LNP, Ameritech separately tracked all costs that were caused by LNP, and projected future costs through its budget process. This LNP budget was developed after careful analysis of the changes that will be needed in the future by the network and provisioning/maintenance/billing systems to make them capable of supporting LNP. Appendix G lists each such item in these accounts and budgets, and explains why it had to be added, modified or augmented to develop, provision, provide, maintain or bill LNP.

X. CONCLUSION.

For the reasons described above, the Commission should expeditiously authorize Ameritech to file tariffs implementing the LNP monthly charge pursuant to the principles indicated above. Ameritech proposes that the Commission adopt the following supplemental principles to provide "guidance" to carriers in developing the LNP monthly charge and the Query Services rates:

1. In order to properly identify and recover all incremental overhead-type costs applicable to the LNP monthly charge, carriers can identify all incremental overhead-type costs that can be readily identified, through a cost study, and supplement that study with estimates of the balance of the incremental overheads through the use of acceptable allocation factors.

2. The Query Services rates should recover their pro rata share of all overhead costs based upon generally accepted allocation factors routinely used for new interstate services.

3. Where an addition, modification, or augmentation is required to support LNP, but also benefits non-LNP services, the resulting costs should be allocated between the

services. Relative usage is a reasonable methodology for allocating costs between the services. In addition, costs that benefit both retail LNP and the Query Services can be allocated between the LNP monthly charge and the Query Services rates based upon projected relative usage. Such allocations can be based on relevant traffic data traffic projections and carrier surveys.

4. SS7 is used extensively by LNP, and carriers should, therefore, be permitted to recover those expenses which they prove are incurred to add, modify or augment SS7 facilities, equipment, and software to support LNP. Where an addition or modification required to support LNP also benefits non-LNP services, it is reasonable to allocate the resulting expenses based upon projected relative usage. In cases where the carrier has vendor bills that isolate those costs necessary to enable SS7 to support LNP, those bills should create a rebuttable presumption that the costs involved are incremental to LNP. In terms of capital investment, it is reasonable to identify those costs based upon incremental usage.

5. Use of OSS is required to pre-order, order, provision, maintain and bill LNP. Carriers should be permitted to recover those OSS costs they can prove were incurred to add, modify or augment OSS facilities, equipment, and software to support LNP. In cases where the carrier has vendor bills that isolate those costs necessary solely to enable OSS to support LNP, those bills should create a rebuttable presumption that the costs involved are incremental to LNP.

6. LNP requires the use of switching capability, including AIN. In cases where a carrier can prove that a switch or AIN addition, modification or augmentation was required to support LNP, the resulting costs should be recognized as direct costs of LNP. In cases where the carrier has vendor bills that isolate those costs necessary solely to enable its switches and AIN facilities to support LNP, those bills should create a rebuttable presumption that the costs involved are incremental to LNP.

7. It is reasonable for a carrier to separately track its direct costs of establishing LNP, and to budget for future LNP investments and expenses. Those accounts and budgets, when combined with vendor bills for LNP related equipment, facilities, software, and labor, should create a rebuttable presumption that the costs involved are direct costs of LNP.

8. Costs of LNP cost may be recovered through the LNP monthly charge.

In addition, the Commission should authorize Ameritech to price the Query Services as new interstate access services, and, as applicable, consistent the above principles.

Respectfully submitted,

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APPENDIX A

Ameritech's Further Comments
August 3, 1998
CC Docket No. 95-116:Long-Term Number Portability

Cost Methodology

1) Ameritech proposes to calculate the costs associated with the Long-Term Number Portability (LNP) services in the following manner:

a) Cost per access line/Unbundled Local Switching (ULS) port recovered through the LNP Monthly Charge.

b) Costs per Query for LNP Query and Unbundled LNP Database Access (Query Services).

The direct costs for the LNP monthly charge and the Query Services will be calculated consistently with three exceptions. As required by the LNP Cost-Recovery Order, the LNP monthly charge will only be assessed for 5 years and the cost of money (return) utilized in the cost study will be 11.25%. In addition, the LNP monthly charge will only recover overhead-type costs that are incremental to LNP. Ameritech recommends that the Query Services costs and prices be developed consistent with new service offerings under price caps rules, including the recovery of overheads based upon the use of a general allocation factor.

The starting point for the cost study will be the specific accounts that Ameritech has established to record the direct investments and expenses of developing and provisioning LNP. Only direct costs were assigned to those accounts through specific initiative codes that were used to report costs that were incurred as a direct result of LNP. Budget projection detail from the Network Unit will also be used to estimate future costs. This source document is referred to as the LNP Cost Tracking System.

Direct costs will be calculated for network related Capital Investments and Expenses, Administration Expenses, Implementation Expenses, SSP (Service Switching Point), STP (Signal Transfer Point) and Link Investments and, if authorized, Interim Number Portability Deferred/Projected Charges. Ameritech's cost study methodology assumes that the Commission intended that the total service long run incremental cost (TSLRIC) of developing, provisioning, providing, maintaining and billing for LNP are recoverable through the LNP monthly charge and the Query Services rates.

The sources for the investments used in the cost studies are primarily the LNP Cost Tracking System (as described above) which is used to identify and record direct costs for LNP and the SS7 cost model utilized by Ameritech. This model uses a capacity allocation approach to develop capital investments associated with SS7 components, including SSPs, STPs and Links.

The direct LNP costs will be allocated between the LNP monthly charge and the Query Services based on the projected percentage of LNP monthly charge queries to total LNP queries and the projected percentage of Query Services queries to total LNP queries. The derivation of the query demand is described in Appendix C.

Due to the 5 year assessment or cost recovery period for the LNP monthly charge, the capital investments directly associated with or allocated to the LNP monthly charge will be depreciated over 5 years in order to ensure total cost recovery. Also, recurring expenses associated with maintenance, administration and taxes will be calculated out into the future, converted to a present worth amount and then also recovered over 5 years.

Ameritech also proposes to recover the incremental overheads associated with the LNP monthly charge from 1) an analysis of identifiable incremental shared and common costs and 2) through the application of a shared and common cost factor which will be derived from an existing analysis of retail shared and common costs. This study is discussed in Appendix B. The shared and common cost study results will be adjusted to remove any overlaps or overheads that are not incremental to LNP.

2) Costs for Six Components will be calculated:

a) Capital Investments -	LNP Cost Tracking System
b) Expenses -	LNP Cost Tracking System
c) Administration Expenses -	LNP Cost Tracking System and Product Management
d) Implementation Expenses -	LNP Cost Tracking System
e) SSP, STP and Link Investments -	SS7 Cost Model
f) Interim Number Portability -	Deferred/Projected Charges

3) Capital Investments:

- The source for the capital investments will be the LNP Cost Tracking System for 1997 - 1999.
- Capital investments will be categorized as Regional, State, End Office or Tandem related.

- State, end office and tandem capital investments will be identified for each jurisdiction as directly specified in the LNP Cost Tracking System or allocated based on the percentage of query demand (usage).
- The 1999 Present Worth of capital investments will be calculated.
- The annual costs will be calculated using the appropriate annual cost factors.
- The annual costs will be multiplied by the percentage of query demand when appropriate to allocate between the LNP monthly charge and the Query Services. Annual costs for OSS required for the LNP monthly charge will be mapped directly to the LNP monthly charge.
- The annual costs associated with the LNP monthly charge will be divided by the annualized demand for retail and resale access lines and unbundled local switching (ULS) ports to obtain an annual cost per access line/ULS port for the Capital Investments.
- The annual costs associated with each of the Query Services will be divided by the annualized demand for Query Services queries to obtain the cost per query for the Capital Investments.

4) Expenses:

- The source for the expenses will be the LNP Cost Tracking System for 1997 – 2006.
- The expenses will be categorized as Regional, State, End Office or Tandem related.
- State, end office and tandem expenses will be identified for each jurisdiction as directly specified in the LNP Cost Tracking System or allocated based on the percentage of query demand (usage).
- The 1999 Present Worth of expenses will be calculated.
- The annual expenses will be calculated by converting the PW of expenses into an annuity.
- The annual expenses will be multiplied by the percentage of query demand when appropriate to allocate between the LNP monthly charge and the Query Services. Certain annual expenses for OSS will be mapped directly to the LNP monthly charge.
- The annual expenses associated with the LNP monthly charge will be divided by the annualized demand for retail and resale access lines and ULS ports to obtain an annual cost per access line/ULS port for the Expenses.
- The annual expenses associated with each of the Query Services will be divided by the annualized demand for Query Services queries to obtain the cost per query for the Expenses.

5) Administration Expenses:

- Administration Expenses consist of two categories of expenses:
  - a) Product Management
  - b) Network

- The hours for Product Management will be obtained from the Business Unit and multiplied by the appropriate directly assigned labor rate to obtain the total Product Management expenses.
- The 1999 Present Worth of Product Management expenses will be calculated.
- The hours for labor related activities for the Network Unit will be obtained from the LNP Cost Tracking System for Years 1997 –1999.
- The hours will be multiplied by the appropriate directly assigned labor rates to obtain the total labor related expenses for the Network Unit.
- The 1999 Present Worth of Network labor related expenses will be calculated.
- The annual administration expenses will be calculated by converting the Present Worth of the administration expenses into an annuity.
- The annual administration expenses will be multiplied by the percentage of query demand (usage) when appropriate to allocate between the LNP monthly charge and the Query Services.
- The annual administration expenses associated with the LNP monthly charge will be divided by the annualized demand for retail and resale access lines and ULS ports to obtain an annual cost per access line/ULS ports for the Administration Expenses.
- The annual administration expenses associated with the Query Services will be divided by the annualized demand for Query Services queries to obtain the cost per query for the Administration Expenses.

6) Implementation Expenses:

- The hours for labor related activities for billing system updates will be obtained from the LNP Cost Tracking System.
- The hours will be multiplied by directly assigned labor rates to obtain the total billing implementation expenses.
- The 1999 Present Worth of implementation expenses will be calculated.
- The annual implementation expenses will be calculated by converting the Present Worth of implementation expenses into an annuity.
- The annual implementation expenses associated with the LNP monthly charge will be divided by the annualized demand for retail and resale access lines and ULS ports to obtain an annual cost per access line/ULS port for the Implementation Expenses.
- The annual implementation expenses associated with the Query Services will be divided by the annualized demand for Query Services queries to obtain the cost per query for the Implementation Expenses.

7) SSP, STP and Link Investments:

- The capital investment components will be SSP End Office Message Formulation, SSP Tandem Message Formulation, Local STP Switching, Hub STP Switching and Links, as applicable.

- The capital investment source will be the SS7 cost model. This model develops the SS7 network investments based on the capacity consumed to provide the feature or function being studied. Outputs from the model will be used to develop costs for LNP Services because each LNP query will utilize SS7 equipment and facilities when processed.
- The capital investments will be developed on a "per octet" basis.
- The capital investments per octet will be multiplied by the number of octets per LNP query to obtain the investment per query.
- The investment per query will be converted to a cost per query using the appropriate annual cost factors.
- For the LNP monthly charge, the cost per query will be multiplied by the annualized the Present Worth of LNP queries to obtain the annual cost for SSP, STP and Links.
- The annual cost for SSP, STP and Links will be divided by the annualized demand for retail and resale access lines and ULS ports to obtain an annual cost per access line/ULS port.

8) Interim Number Portability:

- If authorized, the deferred and projected charges associated with Interim Number Portability cost recovery will be calculated/projected for 1996 and beyond, as applicable, using a Business Unit tracking mechanism.
- The Interim Number Portability total deferred/projected charges will be divided by the annualized demand for retail and resale access lines and ULS ports to obtain an annual cost per access line/ULS port for deferred/projected charges associated with Interim Number Portability.

9) Cost Study Results:

a) LNP Monthly Charge:

- The annual costs per access line/ULS port identified for Capital Investments and Expenses, Administration Expenses, Implementation Expenses, SSP, STP, Links and, if authorized, Interim Number Portability that are associated with the LNP monthly charge will be summed to obtain the LNP annual cost per access line/ULS port.
- The annual cost per access line/ULS port will be divided by 12 to obtain the monthly cost per access line/ULS port.
- The monthly cost per access line/ULS port and the incremental shared and common costs will be added to obtain the LNP monthly charge amount.
-The shared and common costs will be derived from 1) an analysis of incremental shared and common costs that can be readily identified and calculated and 2) through the application of a shared and common cost factor which will be derived from the most current analysis of retail shared and common costs performed by Arthur Andersen personnel. Each item in Andersen study will be reviewed to ensure that there is no double-recovery of costs and that only incremental overhead costs are included.

- The Andersen Study categorizes budget amounts for the retail segments, Network Services and Centralized Services as direct costs, product family shared costs, shared costs and common costs. A shared and common cost loading factor which will be applied to direct costs is developed by dividing the shared and common cost pools by the total retail direct costs.

b) Query Services:

-The annual costs per query identified for Capital Investments and Expenses, Administration Expenses, Implementation Expenses and SSP, STP, and Links that are associated with the Query Services will be summed to obtain the cost per query for the Query Service and Unbundled Database Access.
- The costs per query will be multiplied by the switched access overhead loading factor to obtain the price per query.
- If authorized, the overhead loading factor will employ the standard methodology and will utilize ARMIS data.